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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,765	12/29/2003	Leonard J. Lavasser	GROUND	9094
7590 05/06/2005			EXAMINER	
ROBERT J. HARTER 4233 CLIFFSIDE DRIVE LA CROSSE, WI 54601			PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/747,765

Applicant(s)

LAVASSER ET AL.

Examiner

Erik D. Preston

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/29/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-8, & 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neroda et al. (US 4315343 supplied by applicant) in view of Kiefer et al. (US 3875462) in view of Yartz et al. (US 3159354).

With respect to claims 1, 8, & 17, Neroda teaches a motor comprising: A housing (Fig 2, #44); an inboard bearing (Fig. 2, #48) supported by the housing; a plastic bracket (Fig. 1, #43); an outboard bearing (as seen in Fig. 2) supported by the bracket; a stator (Fig. 2, #42) interposed between the housing and the bracket; a rotor (Fig. 2, #38) supported by the inboard and outboard bearings; an impeller (Fig. 2, #76) attached to the rotor for moving air, wherein the plastic housing defines a discharge outlet (Fig. 2, #74) for the impeller; and a fastening tie rod (as seen in Figure 2) that clamps the stator between the plastic housing and the bracket, but it doesn't teach the housing being plastic; a metal bearing retainer engaging the inboard bearing such that electrical continuity is established between the rotor and the metal bearing retainer; a bearing retainer fastener that fastens the metal bearing retainer to the plastic housing such that the metal bearing retainer holds the inboard bearing to the plastic housing; and a

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metal ground strip having an attachment end, a terminal end, and a central portion there between, wherein the bearing retainer fastener attaches the attachment end to the metal bearing retainer to establish electrical continuity between the rotor and the metal ground strap; and the ground strip having a central portion that extends between the stator and the plastic housing or the tie rod that clamping the stator between the plastic housing and the plastic bracket such that the central portion of the ground strip is held in compression between the stator and the plastic housing, whereby the terminal end of the metal ground strap provides a groundable connection to the stator and the rotor. However, Kiefer teaches a metal bearing retainer (Fig. 1, #104) engaging an inboard bearing such that electrical continuity is established between a rotor and the metal bearing retainer; a bearing retainer fastener (Fig. 1, #120) that fastens the metal bearing retainer to a plastic housing such that the metal bearing retainer holds the inboard bearing to the plastic housing; and a metal ground strip (Fig. 1, #48) having an attachment end, a terminal end, and a central portion there between, wherein the bearing retainer fastener attaches the attachment end to the metal bearing retainer to establish electrical continuity between the rotor and the metal ground strap, and Yartz teaches a motor comprising a metal ground strap (Fig. 1, #46) that extends between a stator (Fig. 1, #41) and a plastic housing (Fig. 1, #43); and a rod-like fastener (Fig. 1, #51) clamping the stator between the plastic housing and the plastic bracket such that the metal ground strap (Fig. 1, #46) is held in compression between the stator and the plastic housing, whereby the terminal end of the metal ground strap provides a

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groundable connection to the stator and the rotor. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Neroda in view of the metal bearing retainer as taught by Kiefer because it provides a means for grounding the rotor of the motor (Kiefer, Col. 5, Lines 8-12), and to modify the motor of Neroda in view of the metal grounding strap as taught by Yartz because it establishes electrical continuity between the ground strap and both the stator and the rotor (Yartz, Col. 3, Line 63- Col. 4, Line).

With respect to claim 2, Neroda in view of Yartz in view of Kiefer teaches the motor of claim 1, wherein the tie rod extends through the metal ground strap.

With respect to claim 3, Neroda in view of Yartz in view of Kiefer teaches the motor of claim 1, wherein the tie rod threadingly engages the plastic housing (even though Neroda doesn't explicitly teach the tie rod being threaded, it is obvious in looking at Figure 2 that the tie rod has threads that engage the bracket).

With respect to claim 4, Neroda in view of Yartz in view of Kiefer teaches the motor of claim 1, wherein the attachment end (Yartz, Fig. 1, #47) and the central portion (Yartz, Fig. 1, #49) of the metal ground strap are substantially parallel to each other.

With respect to claim 6, Neroda in view of Yartz in view of Kiefer teaches the motor of claim 1, wherein the plastic housing (Yartz, Fig. 1, #42) and the stator (Yartz, Fig. 1, #41) define a slot therebetween through which the central portion of the metal ground strap extends, wherein the slot has a depth that is greater than a material thickness of the ground strap yet the central portion of the

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ground strap is still held in compression between the plastic housing and the plastic bracket. Since the ground strap fits in the slot, the slot must have a depth that is greater than the thickness of the strap.

With respect to claim 7, Neroda in view of Yartz in view of Kiefer teaches the motor of claim 1, but it doesn't teach the bearing retainer fastener being a rivet. However, rivets were well known in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to use rivets as fasteners because they don't require tapped holes, and they are less likely to loosen as a result of excess motor vibration.

With respect to claim 18, Neroda in view of Yartz in view of Kiefer teaches the motor claim 17, wherein the bearing retainer fastener is one of two bearing retainer fasteners that lie along a first line, and the tie rod is one of two tie rods that lie along a second line, but it doesn't teach that the second line is substantially perpendicular to the first line. However, the applicant's specification does not disclose what utilitarian purpose there is to the perpendicular positioning of the tie rods (as opposed to the parallel positioning that is shown in Fig. 1 of the applicant's drawings) in respect to the bearing retainer fasteners. Because of this, the requirement of the tie rods to lie on an axis that is perpendicular to the axis of the bearing retainer fasteners is merely a design choice and not given patentable weight (*In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)).

With respect to claim 19, Neroda in view of Yartz in view of Kiefer teaches the motor of claim 17, further comprising an airguide (Neroda, Fig. 2, #74) that

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directs the air from the impeller to the plastic housing, but doesn't teach the bearing retainer fastener further fastening the air guide to the plastic housing. However, as it was stated for claim 18, the applicant's specification does not disclose what utilitarian purpose there is to fastening the airguide to the plastic housing with the bearing retainer fasteners as opposed to other fastening configurations. It is merely a design choice and not given patentable weight (In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neroda et al. (US 4315343 supplied by applicant) in view of Kiefer et al. (US 3875462) in view of Yartz et al. (US 3159354) further in view of Suzuki et al. (4798984 supplied by applicant). Neroda in view of Yartz in view of Kiefer teaches the motor claim 1, further comprising the plastic housing and the central portion of the metal ground strap, wherein the central portion of the metal ground strap is resiliently compressed between the stator and the plastic housing, but doesn't teach a crushable curved section on at least one of the plastic housing and the central portion of the metal ground strap, wherein the crushable curved section is resiliently compressed between the stator and the plastic housing. However, Suzuki teaches a crushable curved surface of a ground strap (Figs. 5A-5E) can be press-fit to make an electrical ground contact (Col. 1, Lines 7-14). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ground strap of Yartz in view of the crushable curved surface as taught by Suzuki because it simplifies the process of constructing a motor (Suzuki, Col. 1, Lines 18-34).

Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neroda et al. (US 4315343 supplied by applicant) in view of Kiefer et al. (US 3875462) in view of Yartz et al. (US 3159354) in view of Suzuki et al. (4798984 supplied by applicant).

With respect to claims 9, 14-16, Neroda teaches a motor comprising: A housing (Fig 2, #44); an inboard bearing (Fig. 2, #48) supported by the housing; a plastic bracket (Fig. 1, #43); an outboard bearing (as seen in Fig. 2) supported by the bracket; a stator (Fig. 2, #42) interposed between the housing and the bracket; a rotor (Fig. 2, #38) supported by the inboard and outboard bearings; an impeller (Fig. 2, #76) attached to the rotor for moving air, wherein the housing defines a discharge outlet (airguide) (Fig. 2, #74) for the impeller; and a fastening tie rod (as seen in Figure 2) that clamps the stator between the housing and the bracket, but it doesn't teach the housing being plastic; a metal bearing retainer engaging the inboard bearing such that electrical continuity is established between the rotor and the metal bearing retainer; a bearing retainer fastener that fastens the metal bearing retainer to the plastic housing such that the metal bearing retainer holds the inboard bearing to the plastic bracket; and a metal ground strip having an attachment end, a terminal end, and a central portion there between, wherein the bearing retainer fastener attaches the attachment end to the metal bearing retainer to establish electrical continuity between the rotor and the metal ground strap; the ground strip having a central portion that extends between the stator and the plastic housing or the tie rod that clamping the stator between the plastic housing and the plastic bracket such that the



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central portion of the ground strip is held in compression between the stator and the plastic housing, whereby the terminal end of the metal ground strap provides a groundable connection to the stator and the rotor; or a crushable curved section borne by at least one of the plastic housing and the central portion of the metal ground strap and the crushable curved section of the ground strap being held in compression between the stator and the plastic housing. However, Kiefer teaches a metal bearing retainer (Fig. 1, #104) engaging an inboard bearing such that electrical continuity is established between a rotor and the metal bearing retainer; a bearing retainer fastener (Fig. 1, #120) that fastens the metal bearing retainer to a plastic housing such that the metal bearing retainer holds the inboard bearing to the plastic housing; and a metal ground strip (Fig. 1, #48) having an attachment end, a terminal end, and a central portion there between, wherein the bearing retainer fastener attaches the attachment end to the metal bearing retainer to establish electrical continuity between the rotor and the metal ground strap, Yartz teaches a motor comprising a metal ground strap that extends between a stator (Fig. 1, #41) and a plastic housing (Fig. 1, #42); and a rod-like fastener (Fig. 1, #51) clamping the stator between the plastic housing and the plastic bracket such that the metal ground strap (Fig. 1, #46) is held in compression between the stator and the plastic housing, whereby the terminal end of the metal ground strap provides a groundable connection to the stator and the rotor, and Suzuki teaches a crushable curved surface of a ground strap (Figs. 5A-5E) can be press-fit to make an electrical ground contact (Col. 1, Lines 7-14). It would have been obvious to one of ordinary skill in the art at the time of the

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invention to modify the motor of Neroda in view of the metal bearing retainer as taught by Kiefer because it provides a means for grounding the rotor of the motor (Kiefer, Col. 5, Lines 8-12), to modify the motor of Neroda in view of the metal grounding strap as taught by Yartz because it establishes electrical continuity between the ground strap and both the stator and the rotor (Yartz, Col. 3, Line 63- Col. 4, Line), and invention to modify the ground strap of Yartz in view of the crushable curved surface as taught by Suzuki because it simplifies the process of constructing a motor (Suzuki, Col. 1, Lines 18-34).

With respect to claim 10, Neroda in view of Yartz in view of Kiefer in view of Suzuki teaches the motor of claim 9, wherein the tie rod threadingly engages the plastic housing (even though Neroda doesn't explicitly teach the tie rod being threaded, it is obvious in looking at Figure 2 that the tie rod has threads that engage the bracket).

With respect to claim 11, Neroda in view of Yartz in view of Kiefer in view of Suzuki teaches the motor of claim 9, wherein the attachment end (Yartz, Fig. 1, #47) and the central portion (Yartz, Fig. 1, #49) of the metal ground strap are substantially parallel to each other.

With respect to claim 12, Neroda in view of Yartz in view of Kiefer in view of Suzuki teaches the motor of claim 9, wherein the plastic housing (Yartz, Fig. 1, #42) and the stator (Yartz, Fig. 1, #41) define a slot therebetween through which the central portion of the metal ground strap extends, wherein the slot has a depth that is greater than a material thickness of the group strap yet the central portion of the ground strap is still held in compression between the plastic

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housing and the plastic bracket. Since the ground strap fits in the slot, the slot must have a depth that is greater than the thickness of the strap.

With respect to claim 14, Neroda in view of Yartz in view of Kiefer in view of Suzuki teaches the motor of claim 9, but it doesn't teach the bearing retainer fastener being a rivet. However, rivets were well known in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to use rivets as fasteners because they don't require tapped holes, and they are less likely to loosen as a result of excess motor vibration.

### ***Conclusion***

Applicant is advised that should claim 5 be found allowable, claim 9 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



04/28/2005



BURTON S. MULLINS  
PRIMARY EXAMINER